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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,449	08/17/2000	Nicholas David Butler	6169-179	6962

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EXAMINER

LERNER, MARTIN

ART UNIT	PAPER NUMBER
2654	7

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/641,449

Applicant(s)

BUTLER ET AL.

Examiner

Martin Lerner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 to 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by *Stanford et al.*

Regarding independent claim 1, *Stanford et al.* discloses an interactive voice response system, comprising:

“a plurality of speech technology modules, each module for recognizing speech input from a user or generating speech output for a user” – context voice response files 400 and context prompt display files 410; context voice response files 400 are digital voice files stored for each respective recognition context; context prompt display files 410 are stored for each respective recognition context; recognition server 108 recognizes speech, and voice response output 402 generates voice responses from prompting files 414 (column 8, lines 10 to 20: Figure 1);

“a voice application defining a plurality of interactions between a user and the speech technology modules” – user applications 110; user application programs 110 may include Executive Information Systems, Data Base Access via verbal query,

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software problem reporting systems, a telephone answering voice response unit, and a restaurant locator (column 10, lines 13 to 55: Figure 1);

“each interaction having a task property and an interaction environment property”

– user applications can pre-register many contexts: a restaurant locator, a hard disk help desk, or software help desk can all pre-register multiple contexts hierarchically; each application will tell the recognition server to perform a recognition under a particular context for a particular speech stream, as appropriate for the task being executed (column 10, lines 42 to 55: Figure 1); a context is “a task property”; additionally, a supplemental dictionary 138 allows for the addition of the pronunciation of words not found in the base dictionary; in an application which provides information on area restaurants, a first context may be the type of restaurant the caller wants, e.g. French, Italian, Chinese and a second context once the type was established would be the restaurants in that particular category; in a restaurant help desk, restaurant name, particularly in foreign languages, but also unusual names for an American restaurant, will not be in the normal dictionary, and must be added to the task supplemental dictionary; these supplemental dictionaries contain local vocabulary which override the pronunciations in the base General English dictionary 132 (column 11, lines 4 to 23: Figure 1); supplemental dictionaries provide “an interaction environment property”; “a task property” involves a restaurant help desk with context voice response files 400 and context prompt display files 410 for a restaurant help desk; “an interaction environment property” involves supplemental dictionaries 138 for word pronunciations in foreign languages;

“a speech technology selection module for selecting, for each interaction, one of the speech technology modules from the plurality of the modules to be used by the application according to the environment property of the interaction” – Application Programming Interface (API) 108 generates a plurality of signals 406, 408 as API calls, or response signals, to select responses and provide context control involved in speech generation and speech recognition, respectively (column 10, lines 13 to 15; column 12, lines 6 to 29: Figure 1); the application program interface 108 offers recognition services which allow data stream control, context loading, and activation (column 8, lines 19 to 21: Figure 1); for a particular recognized speech string, recognition server 108 will output a corresponding response signal to the voice response output 402 over the response select 406; the response select 406 will identify which one of a plurality of stored digital voice responses are to be announced (column 12, lines 6 to 21: Figures 1 and 3); contexts (“a task property”) are associated with supplemental dictionaries 138 (“an environmental property of the interaction”), so recognition server 108 selects both contexts and supplemental dictionaries with response select 406.

Regarding claim 2, *Stanford et al.* further discloses:

“a plurality of parameter sets associated with each speech technology module” – mapping vectors 230 are stored along with the task recognition load module; applications arrange for the pre-storing of all tasks 240 and maps 230 they might require (column 13, line 62 to column 14, line 9: Figure 3);

“a parameter selection module for selecting one of the parameter sets for use with the selected speech technology module according to the environment property of

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the interaction and the task property of the interaction" – when a particular application requires and gets the focus of the recognition engine for recognition with a particular task ("the task property of the interaction"), the requested task search network is engaged by a simple assignment of one of several base pointers (column 13, line 62 to column 14, line 9: Figure 3); implicitly, pointer maps 230 also provide access to supplemental dictionaries 138 ("the environment property of the interaction").

Regarding claim 5, *Stanford et al.* further discloses user application programs 110 may include Executive Information Systems, Data Base Access via verbal query, software problem reporting systems, a telephone answering voice response unit, and a restaurant locator (column 10, lines 13 to 55: Figure 1); the type of application service being requested, e.g. restaurant locator, is the "call type" requested by the user from his/her telephone.

Regarding claim 6, *Stanford et al.* further discloses supplemental dictionaries 138 contain local vocabulary which override the pronunciations in the base General English dictionary (column 11, lines 4 to 23: Figure 1); thus, the supplemental dictionaries 138 ("an application environment property") provide a pronunciation that "takes priority" over a pronunciation in the base General English dictionary 132.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Stanford et al.* in view of *Lee et al.*

Stanford et al. suggests contexts may involve pronunciations of foreign languages, but does not expressly disclose an environment property of a language identifier and a regional identifier. However, *Lee et al.* teaches a related voice interactive system, where a language server 300 receives requests from a user, and directs the output of messages in the user selected language ("a language identifier"). (Column 5, Line 45 to Column 6, Line 32; Column 7, Lines 3 to 22: Figure 3) Additionally, *Lee et al.* provides a language property rule table for regional language variants including American English and British English ("a regional identifier"). (Column 6, Lines 33 to 45: Figure 3) *Lee et al.* suggests a messaging server language configuration method and apparatus that is efficient for dynamically configuring messaging servers for different languages without re-compiling the messaging program or re-writing the messages in another language. (Column 1, Line 20 to Column 2, Line 36) It would have been obvious to one having ordinary skill in the art to include language identifiers and regional identifiers as taught by *Lee et al.* in the voice response system of *Stanford et al.* for the purpose of providing an efficient messaging system for different languages without re-writing messages in another language.

Response to Arguments

5. Applicants' arguments filed 24 November 2004 have been fully considered but they are not persuasive.

Firstly, Applicants argue *Stanford et al.* does not provide for a plurality of software-based speech technology modules. Instead, Applicants maintain *Stanford et al.* discloses a plurality of digital voice files and prompt display files. Applicants say *Stanford et al.* only discloses a single speech recognition engine. This position is not persuasive.

It should be clear to one having ordinary skill in the art that *Stanford et al.* is a software-based speech technology system. The invention of *Stanford et al.* is claimed as a data processing system with a processor and a memory, and those skilled in the art would know that speech recognition systems are written as software.

Moreover, Applicants' invention as claimed does not positively require more than a single speech recognition engine. Independent claim 1, as drafted, only states that there are a plurality of speech technology software modules, each module for recognizing speech input or for generating speech output. Even leaving aside the question as to whether each of the context voice response files 400 represents the same or a different speech recognition engine, *Stanford et al.* clearly discloses a plurality of speech technology modules for recognizing or generating speech. Context prompt display files 410 generate speech and context voice response files 400 recognize speech. Similarly, recognition server 108 recognizes speech, and voice

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response output 402 generates voice responses from prompting files 414. Each of these blocks from Figure 1 of *Stanford et al.* is a speech technology module. Thus, *Stanford et al.* includes a plurality of speech technology modules, where each of the plurality of speech technology modules is involved either in recognizing speech or generating speech output for a user.

Secondly, Applicants argue *Stanford et al.* does not teach a speech technology selection module. Instead, Applicants say *Stanford et al.* discloses an Application Programming Interface (API), which does not operate in an automated fashion to perform intelligent switching between multiple speech technology modules. Applicants maintain *Stanford et al.* merely selects which one a plurality of stored digital voice responses are to be announced. This position is not persuasive.

Application Programming Interface (API) 108 generates a plurality of signals 406, 408 as API calls (or response signals) to select responses and provide context control involved in speech generation and speech recognition, respectively. The API calls generate responses and recognition contexts, including vocabularies and supplemental dictionaries, appropriate to an environment of the interaction. The Application Programming Interface (API) of *Stanford et al.*, by generating API calls for response selects 406 and context controls 408, does indeed perform intelligent switching between a plurality of speech technology modules. Thus, the API 108 of *Stanford et al.* is equivalent to the speech technology selection module for selecting one of the speech technology modules from the plurality of modules, as claimed.

Finally, Applicants maintain that *Lee et al.* fails to make up for the deficiency of *Stanford et al.*, and actually teaches away from the use of multiple speech technology modules taught by their invention.

However, it is maintained *Stanford et al.*, in fact, does disclose the use of multiple speech technology modules, as discussed above. Moreover, *Lee et al.* is cited only for the feature that the environment property is a language identifier or a regional identifier. As such, Applicants' argument with respect to *Lee et al.* is directed to a piecemeal analysis of the references, without addressing the basis of the combination. It follows that *Lee et al.* does not teach away from a feature that is positively disclosed by *Stanford et al.* One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Therefore, the rejections of claims 1, 2, 5, and 6 under 35 U.S.C. 102(b) as being anticipated by *Stanford et al.*, and of claims 3 and 4 under 35 U.S.C. 103(a) as being unpatentable over *Stanford et al.* in view of *Lee et al.*, are proper.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



ML
1/27/04



RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER